Such payment shall be full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

SECTION 629
MAILBOXES

629.01. DESCRIPTION.

(a) **General.** The purpose of this Subsection is to specify the placement of mailboxes on public rights-of-way of the road system, with due regard for the safety of the traveling public and safe access for both the delivery and retrieval of items delivered by the United States Postal Service.

629.02. MATERIALS.

(a) **Mailboxes.** Mailboxes shall be of light metal construction or formed thermoplastic conforming to the requirements of the United States Postal Service (USPS). Requirements covering dimensions, nomenclature, and required marking is contained in " A Guide for Erecting Mailboxes on Highways (Appendix C)," 1984, AASHTO. Newspaper receiver tubes or boxes shall be of the same type materials, but do not need to adhere to any other requirements of the USPS. Dimensions for the newspaper receiver tube or box shall be the minimum necessary to receive the largest item normally delivered to the box. The property owner is responsible for providing newspaper tubes and placing names on mailboxes.

(b) **Post Systems.**

(1) Wood Post. The support post system shall consist of a single 4 inch x 4 inch (100mm x 100mm) wood post, treated or untreated, durable to the elements and soil borne attack. The post dimensions are nominal, and the post may be furnished smooth and square on four sides or rough sawn. The possible slivering surfaces shall not present a hazard to the delivery person or the owner. The post may be finished natural, oiled, or painted.Alternate posts may be a nominal 4 1/2 inch (114 mm) diameter wood post, treated or untreated, durable to the elements and soil borne attack. The post must be furnished with bark removed, and may be natural, oiled, or painted in finish.

(2) Metal Posts. A metal post system may be used provided the steel pipe posts, cold rolled shape, or hot rolled member has an equal or less strength in bending as a nominal 2 inch (50 mm) diameter standard weight steel pipe (Schedule 40). The test criteria which must be met is Section Modulus (Schedule 40-2 inch (50 mm) nominal pipe) multiplied by 36000 psi (250MPa) (yield strength of Schedule 40 pipe) must be greater than or equal to section modulus of new post system multiplied by the tested yield strength. Example: The product (0.561 inches cubed (9.14 centimeter cubed) (Section Modulus of Schedule 40-2 inch (50 mm) Pipe) x 36000 psi (250MPa) (Yield Strength of Schedule 40-50 mm Pipe) shall be greater than or equal to the product (Section Modulus of New Shape) x (Tested Yield Strength of New Shape). Aluminum tubing (round or square) or aluminized steel tubing (round or square) may also be used if the section affords sufficient strength to support the box array and withstand lateral loads caused by mail and paper delivery and/or retrieval.

Metal post systems integrating a mailbox support arm for single or multiple (not to exceed 5 mailboxes) are commercially available. The automatically accepted designs are those having favorably passed a Department-approved crash test to ensure safety to occupants of an impacting vehicle.

See Subsection 107.03 of the Standard Specifications for guidance in use of patented materials, systems, and devices.

(3) Post-to-box attachment. Post-to-box attachment fittings shall be of sufficient strength to prevent the mailbox from separating from the post top when the completed installation is struck by an automobile or light truck.

*(***4) Basis of acceptance.** Basis of acceptance will be a Type D certification for materials and visual inspection by Department project personnel.

629.04. CONSTRUCTION METHODS.

(a) **General.** All mailboxes designs—single post-single box, single post-multiple box, or multiple single post-single box array—must be only strong enough to withstand wind loading and/or lateral loading associated with delivery and retrieval of box contents. In no case shall a concrete footing be used without approval of the Resident Engineer. In those cases, a concrete footing or a footing of native soil mixed with a cementatious media must be necessary to guarantee the post will remain upright in the native soil. The post cannot exceed the dimensions or strength criteria given in Subsection 629.02, and in certain cases must be weakened at the soil surface plane to guarantee bending or failure in the event of impact by a vehicle. Accepted designs having passed an approved crash test with a concrete footing may be constructed with a concrete footing or installed through an asphalt or portland cement concrete surface. Embedment is 2 feet (0.6 m) maximum depth for all post types, or as recommended by the manufacturer or supplier.

The metal post system may have an anti-twist device, but it cannot extend more than 10 inches (250mm) into the ground.

Although placed on public right-of-way, mailboxes are privately owned. Coordinate with the box owner and the USPS to ensure the owners receive mail deliveries at all times, and the owner has ample opportunity to claim salvable items in the existing mailbox installation, not to exceed the lesser of 60 days or the duration of the Contract.

Not more than two mailboxes may be mounted on a single post support system, unless the support system has been shown to be safe for more than two mailboxes by an approved crash test. Lightweight newspaper receiver boxes (tubes) may be mounted below the mailbox or on the post below the mailbox.

Mailbox support system designs not covered in this specification or on standard drawings will be acceptable if approved by the Chief Engineer (or designee) of the Department.

NOTE: Mailbox support systems and/or housings which are rigid, massive, and/or unyielding, or which could cause heavy damage to impacting vehicles or severe injury and deaths to the occupants, are strictly prohibited and will not be approved under any circumstance.

Support systems using a cantilever arm to maximize the post offset are encouraged where terrain and circumstance permit.

(b) **Placement.** No mailbox will be permitted where access is obtained from the through lanes of a freeway, or where access is otherwise prohibited by law, regulation, ordinance, or policy. Horizontal spacing between multiple single post support system members must not be closer than 3/4 the exposed height of the post (including the box and/or excess post higher than the box) above the ground line.

Locate mailboxes on the right-hand side of the roadway in the direction of the delivery route except on one-way streets where they may be placed on the left-hand side. Set the bottom of the box at an elevation established by the USPS route carrier, usually between 3 feet (1 m) and 4 feet (1.22 m) above the roadway surface. Offset the roadside face of the box from the edge of the traveled way a minimum distance, as shown on standard drawings.

Exceptions to the lateral placement criteria above will exist on residential streets and certain designated rural roads where the Department deems it in the public interest to permit lesser clearances or to require greater clearances. Place mailbox(es) located at driveway entrances on the near side of the driveway in the direction of the delivery route.

When mailbox(es) are located at an intersecting road, place them a minimum distance in advance or beyond the center of the through road in the direction of the delivery route. See Standard Drawing for placement criteria on through roadways and cross roads.

629.05. METHOD OF MEASUREMENT.

Removal of mailbox installation on the project will be measured separately for each in-place mailbox installation. *Remove and reset mailbox* will be measured separately by each item to be removed and reset. Each existing mailbox within the project limits affected by the construction and/or construction slopes will be measured by either the removal of mailbox installation or the remove and reset mailbox unit.

To remove and reset a mailbox shall include the removal, storage, and reconstruction of the complete mailbox installation, which includes the serviceable, crash-worthy support system and the conforming mailbox unit.

Construction of mailbox installations (support systems) will be measured by each *mailbox installation—single or multiple.* One mailbox supported by any approved support system will be measured by each mailbox installation-single. Two or more mailboxes supported by any approved support system will be measured by each mailbox installation-multiple.

Mailbox will be measured by each mailbox regardless of the type of installation; this includes every mailbox installed. The various approved sizes should be summarized or subnoted within the plans to indicate the number required and the station/locations where erection is suggested.

Base and surfacing quantities for the all-weather turnout as shown on the Standard Drawing will not be measured as part of the mailbox installation or removal items. Turnout quantities will be measured for payment in items of surfacing included in the Plans.

Owner-generated items will not be measured for payment, such as newspaper tubes and/or their installation and names painted on the mailboxes or appurtenate identification items.

629.06. BASIS OF PAYMENT.

Mailbox(es), mailbox installation(s), removal of mailbox installations, and the removal resetting of mailboxes will be paid for at the contract unit price as follows:

(A) MAILBOX INSTALLATION-SINGLE ..... EACH
(B) MAILBOX INSTALLATION-MULTIPLE ..... EACH
(C) MAILBOX ..... EACH
(D) REMOVAL OF MAILBOX INSTALLATION ..... EACH
(E) REMOVE AND RESET MAILBOX ..... EACH

Such payment shall be full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

SECTION 640
FIELD OFFICE OR LABORATORY

640.01. DESCRIPTION.

This item covers the furnishing of a field office when shown on the Plans, and a laboratory building at all asphalt or ready-mixed concrete plants, when shown on the plans, for the independent and exclusive use of the Highway Department personnel for the duration of the project. The building may be either a mobile unit or a permanent structure.

640.02. MATERIALS.

The building used for field office or laboratory shall be weatherproof and maintained at all times in a manner approved by the Engineer, who will designate an acceptable site. This field office or laboratory shall be installed within the time frame established by the Engineer.

Minimum outside dimensions of the building shall be 8 feet (2.4 m) wide and 16 feet (4.9 m) long. The inside ceiling height shall be not less than 7 feet (2 m). The building shall be floored, and have at least four windows which can be opened, closed, and locked. It shall have two doors near opposite ends of the building which can be secured and locked.

The building shall contain an office desk and at least one acceptable chair, be properly wired for electricity with at least three double wall plugs conveniently located and three overhead ceiling lights, and be heated and cooled so the inside room temperature can be maintained at 75°F ± 5°F(24ºC ± 3ºC) at all times.

Furnish all required utility service; the cost of utility connections or site preparation shall be included in other items.

A building unit used as the laboratory shall meet the following additional requirements:

It shall be located at the plant site at a location acceptable to the Engineer that is convenient to the physical control center of the plant and where all delivery, loading, and unloading operations can be observed conveniently from the building.